What Is Breast Cancer?

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Breast cancer is a type of cancer that starts in the breast. It can start in one or both breasts.

Cancer starts when cells begin to grow out of control. (To learn more about how cancers start and spread, see What Is Cancer?)

Breast cancer occurs almost entirely in women, but men can get breast cancer, too.

It's important to understand that most breast lumps are benign and not cancer (malignant). Non-cancer breast tumors are abnormal growths, but they do not spread outside of the breast. They are not life threatening, but some types of benign breast lumps can increase a woman's risk of getting breast cancer. Any breast lump or change needs to be checked by a health care professional to find out if it is benign or malignant (cancer) and if it might affect your future cancer risk. See Non-cancerous Breast Conditions to learn more.

Where breast cancer starts

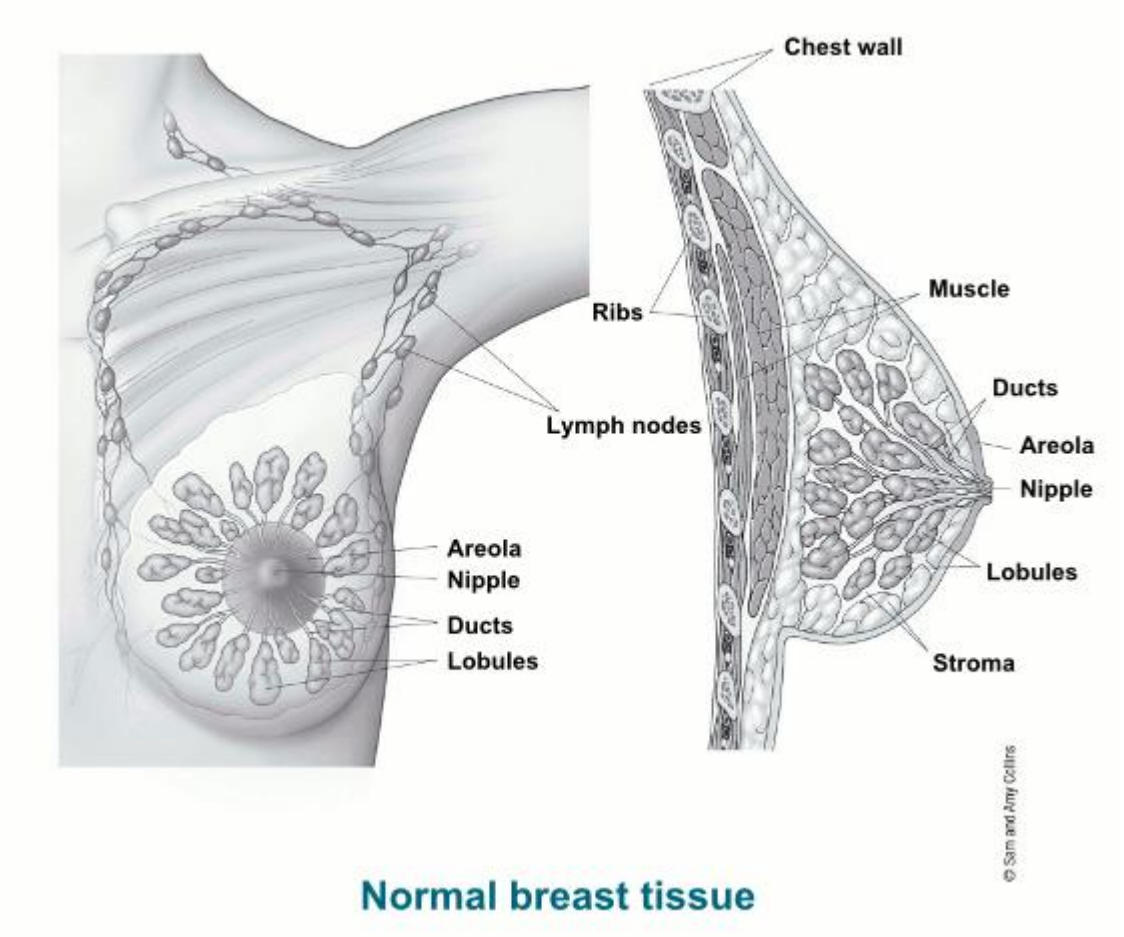
Breast cancers can start from different parts of the breast. The breast is an organ that sits on top of the upper ribs and chest muscles. There is a left and right breast and each one has mainly glands, ducts, and fatty tissue. In women, the breast makes and delivers milk to feed newborns and infants. The amount of fatty tissue in the breast determines the size of each breast.

The breast has different parts:

- **Lobules** are the glands that make breast milk. Cancers that start here are called **lobular cancers**.
- **Ducts** are small canals that come out from the lobules and carry the milk to the nipple. This is the most common place for breast cancer to start. Cancers that start here are called **ductal cancers**.
- The **nipple** is the opening in the skin of the breast where the ducts come together and turn into larger ducts so the milk can leave the breast. The nipple is surrounded by slightly darker thicker skin called the **areola**. A less common type of breast cancer called Paget disease of the breast can start in the nipple.
- The **fat and connective tissue (stroma)** surround the ducts and lobules and help keep them in place. A less common type of breast cancer called phyllodes tumor can start in the stroma.
- **Blood vessels** and **lymph vessels** are also found in each breast. Angiosarcoma is a less common type of breast cancer that can start in the lining of these vessels. The lymph system is described below.

A small number of cancers start in other tissues in the breast. These cancers are called sarcomas and lymphomas and are not really thought of as breast cancers.

To learn more, see Types of Breast Cancer.



How breast cancer spreads

Breast cancer can spread when the cancer cells get into the blood or lymph system and then are carried to other parts of the body.

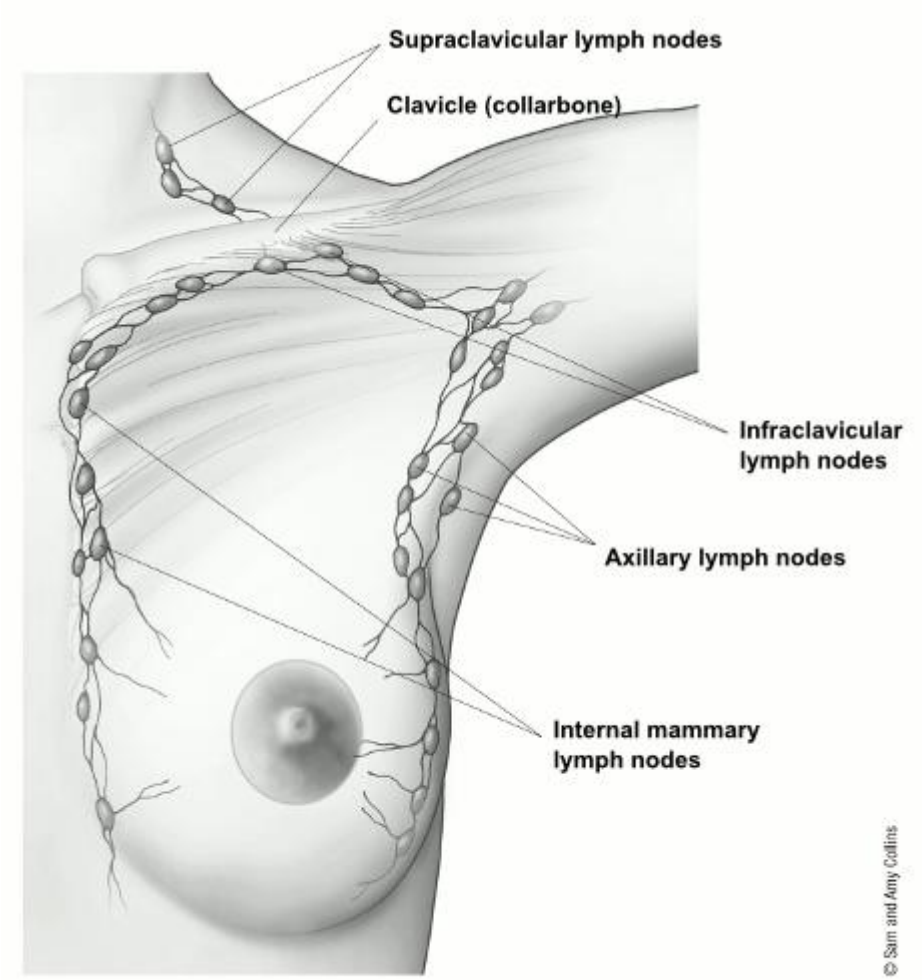
The lymph (or lymphatic) system is a part of your body's immune system. It is a network of lymph nodes (small, bean-sized glands), ducts or vessels, and organs that work together to collect and carry clear lymph fluid through the body tissues to the blood. The clear lymph fluid inside the lymph vessels contains tissue by-products and waste material, as well as immune system cells.

The lymph vessels carry lymph fluid away from the breast. In the case of breast cancer, cancer cells can enter those lymph vessels and start to grow in lymph nodes. Most of the lymph vessels of the breast drain into:

- Lymph nodes under the arm (**axillary** lymph nodes)
- Lymph nodes inside the chest near the breastbone (**internal mammary** lymph nodes)
- Lymph nodes around the collar bone (**supraclavicular** [above the collar bone] and **infraclavicular** [below the collar bone] lymph nodes)

If cancer cells have spread to your lymph nodes, there is a higher chance that the cells could have traveled through the lymph system and spread (metastasized) to other parts of your body. Still, not all women with cancer cells in their lymph nodes develop

metastases, and some women with no cancer cells in their lymph nodes might develop metastases later.



Lymph nodes in relation to the breast

Types of breast cancer

There are many different types of breast cancer. The type is determined by the specific kind of cells in the breast that are affected. Most breast cancers are **carcinomas**. The most common breast cancers such as ductal carcinoma in situ (DCIS) and invasive carcinoma are **adenocarcinomas**, since the cancers start in the gland cells in the milk ducts or the lobules (milk-producing glands). Other kinds of cancers can grow in the breast, like angiosarcoma or sarcoma, but are not considered breast cancer since they start in different cells of the breast.

Breast cancers are also classified by certain types of proteins or genes each cancer might make. After a biopsy is done, breast cancer cells are tested for proteins called estrogen receptors and progesterone receptors, and the HER2 gene or protein. The tumor cells are also closely looked at in the lab to find out what grade it is. The specific proteins found and the tumor grade can help decide the stage of the cancer and treatment options.

To learn more about the specific tests done on breast cancer cells, see Understanding a Breast Cancer Diagnosis.